SIEMENS

CE

FC330A

Synova®

Auto-addressing analogue fire control panel

- **Two-loop addressable panel, expandable to 4 loops**
- **Optional 4 or 12 conventional lines (e.g. for retrofit, modernisation)**
- **Commissioning in record time by auto-addressing localisation**
- **Auto-addressing eliminates the setting of dip switches, punch cards, etc.**
- **Automatic localization of interruptions and short circuits**
- **Unshielded cables prevent irksome ground-returns**
- **Periodic self-test facility**
- **Serial interface for third-party building management systems, repeaters, printer, etc.**
- **Additional cards may be retrofitted at anytime for customized solutions**
- **Maintenance can be matched to customer needs**

Fire & Security Products

Siemens Building Technologies

Product features

Synova FC330A has all the requirements for intelligent systems. Addressing is automatic and address allocation takes only seconds. To improve security and increase speed, distributed intelligence enables detectors to verify danger signals independently.

512 addressable and 384 conventional fire detectors, regardless of type, may be connected to the Synova FC330A fire control panel.

Commissioning, which comprises auto-addressing of all connected elements, is executed by the intelligent SynoLOOP transmission protocol. Time-consuming preparatory work such as setting dip switches, punch cards, etc., is no longer necessary, providing reliable on-time commissioning.

Siemens equips all auto-addressable elements with isolators. No separate isolator has to be planned nor installed. If a short circuit occurs, the panel localises and isolates the defective cable section. The loop system permits data flow in both directions up to the error source with optimum safety, until the short-circuit is fixed. This kind of automatic isolation facilitates fire section planning, as well as adaptation to changing needs.

Expansion with various additional cards permits almost unlimited customised solutions.

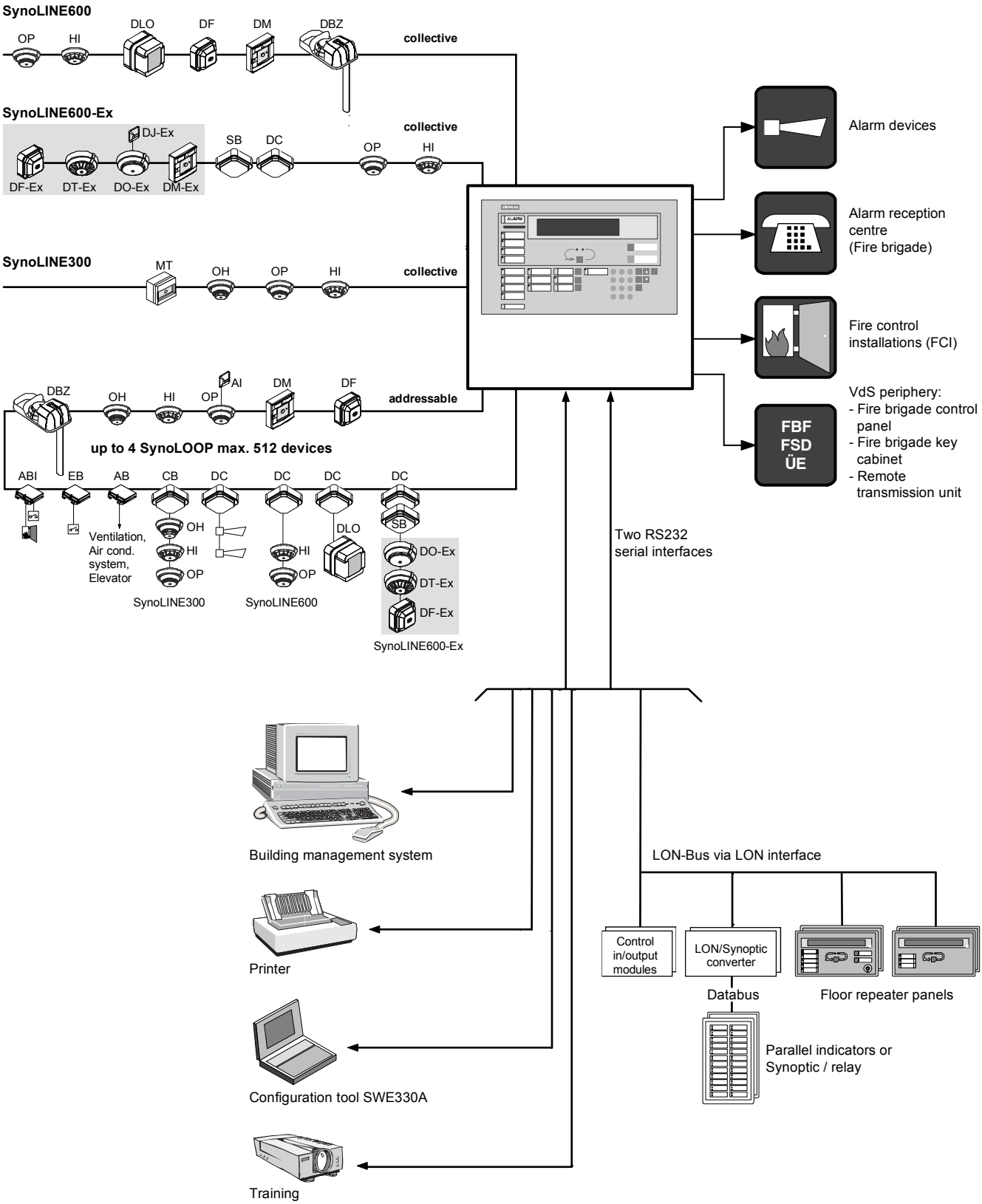
The three main fire control panel models

FC330A-1
The FC330A-1 standard fire control panel features the SynoLOOP K3X020 master board, an LCD unit, and the operator keypad.

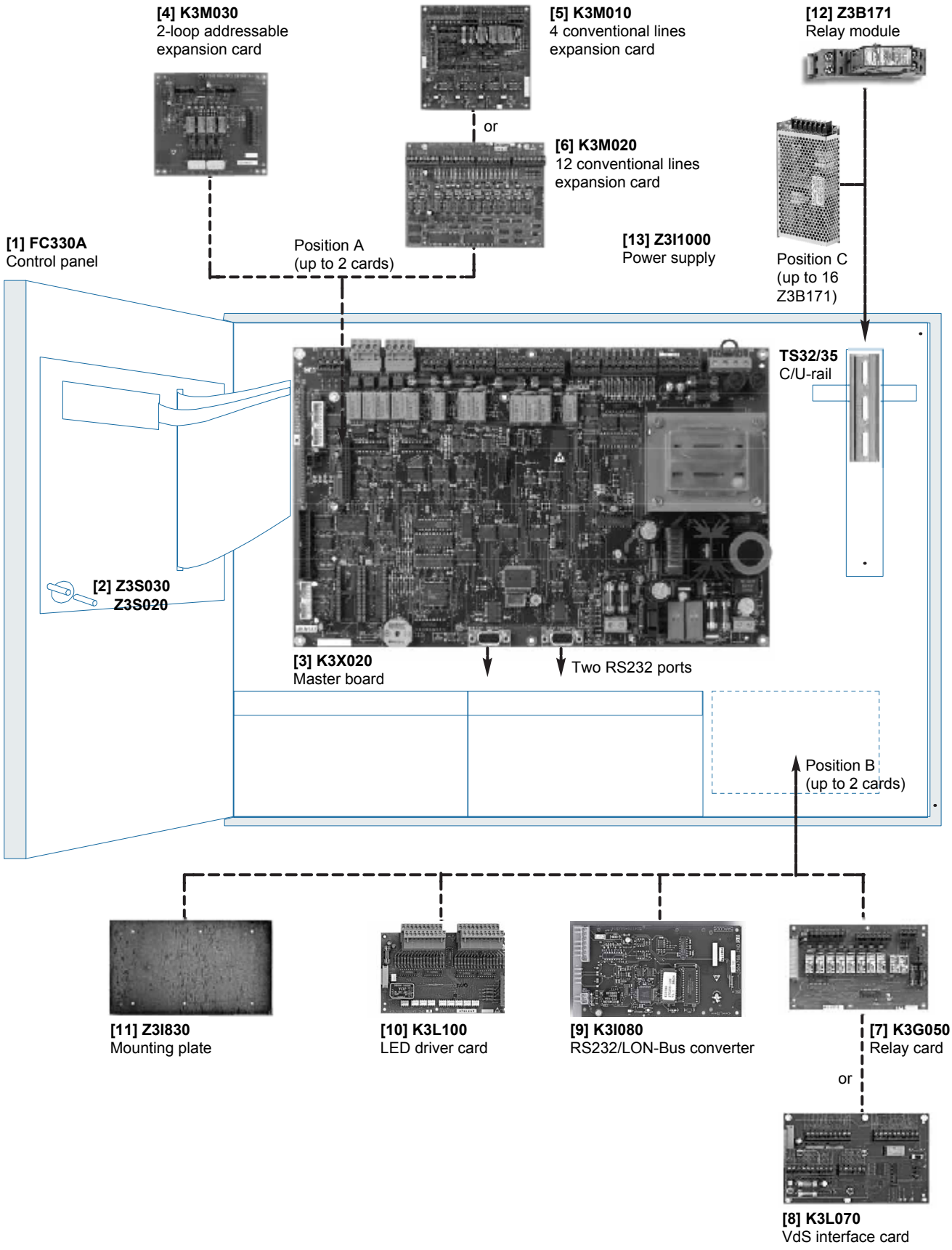
FC330A-4
The FC330A-4 control panel can accommodate A4 and even A3 documents. The panel door accessible with a key, protects against unauthorized access. A second inner door provides easy access for installation and maintenance access.

FC330A-2
The FC330A-2 model consists of the standard control panel, expandable with parallel indicator panel (B3R080)

System overview



FC330A (two-loop) and its expansions

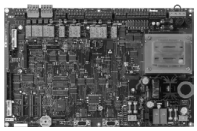


[1] Fire control panel FC330A
The FC330A fire control panel accommodates
– Smoke, heat and multi-sensor detectors and manual call points from different series
– Special detectors (flame detectors, Ex-detectors, highly sensitive detectors) for special applications
– Input and output modules
– Conventional line modules and siren outputs

Fire control panel FC330A is equipped with state-of-the-art software, virtually unlimited range of applications may be programmed easily. It provides
– Intuitive, menu-driven operation
– Definable detector groups or fire zones
– Dual-detector independence
– Chronological storage and retrieval of up to 200 events
– Windows-based software tool for parameter programming, etc.

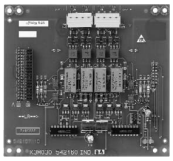
FC330A-2

[2] Access with key Z3S030/Z3S020
The system operator may access the fire detection system in three ways: by passwords, without any password, or with access keys. Two kinds of key switches are available:
– Module Z3S030 is integrated in an existing like-keyed concept
– Module Z3S020 follows the Nordic fire brigade concept



[3] SynoLOOP master board K3X020
The master board is the basic control panel module and is part of its basic equipment. Switched on, the master board recognises all connected elements and is ready to transmit fire alarms.
Two auto-addressing SynoLOOP ring cablings (with 128 detectors each) or two stub lines (with 32 addressable detectors each) may be connected to the master board. The master board has in addition the built-in:
– 8 Programmable control outputs
– 2 Monitored output (Sirens)
– 2 Control line relays
– Alarm and fault relays (to long distance transmission devices)

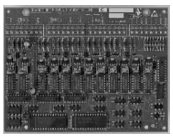
Two RS232 interfaces accommodate various applications:
– System programming
– Printer connection for event protocol printouts
– LON-bus connection
– Incorporation in a building management system (BMS)
– Connection of the visualiser training tool, to operate the FC330A via your PC



[4] Addressable 2-loop expansion card K3M030
The K3M030 allows to expand the FC330A by 2 addressable loops with up to 256 detectors, or 2 stub lines with up to 32 detectors per stub.

Conventional line expansion cards
Existing, conventional detectors may be integrated in the new, auto-addressing system by means of a conventional line expansion card. The K3M020 card has two line specifications for each conventional line which allows the use of various conventional detectors. The conventional line expansion card also makes special applications, such as connection of beam detectors, possible.

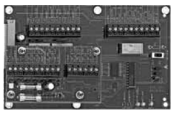
[5] Collective line expansion card K3M010
The K3M010 allows expansion of the control panel by:
– 4 conventional lines
– 4 programmable driver outputs
– 2 monitored outputs (Sirens)
– 2 relay switch contacts



[6] Conventional line expansion card K3M020
The K3M020 allows expansion of the control panel by up to:
– 12 conventional lines
– 8 programmable driver outputs

[7] Relay card K3G050
Relay card K3G050 triggers fire controls such as activation of fire doors or air vents. It offers additionally the following outputs:
– 8 relay switch contacts (30VDC / 2A)
– 4 programmable outputs (24VDC / 48mA)
– 2 monitored outputs (Sirens) (24VDC / 500mA)

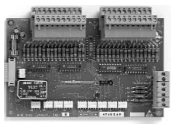
A plug is available for the relay card or the VdS Interface card.



[8] VdS Interface Card K3L070
This card is only needed, when VdS peripherals are specified.
The card contains the fire service key box adapter. It also permits the connection to a fire brigade operating panel or a transmission device. A standard extinguishing interface is provided. One plug is provided for the VdS card or the relay card (K3G050).

[9] LON-bus converter card K3I080
The K3I080 LON-bus converter card is used to connect to the control panel with various LON-bus applications:
- Floor repeater panels
- Floor or situational plans
- LED parallel indications
- Various input and output signal possibilities

Converter cards on the LON-bus make numerous user-oriented solutions possible. For instance, up to 16 floor repeater panels may be connected to the LON bus and up to 256 addresses can be managed for max. 9216 LED displays.
The LON-bus converter card is built directly into the control panel and connected to one of the two RS232 serial outputs. For more information consult the datasheet 007349.



[10] LED driver card K3L100
The K3L100 LED driver card can connect 32 external LEDs. They may be up to 400m away from the control panel. e.g. for floor plans with allocation to one or more fire zones, etc.
The LED driver card helps to indicate all manner of events – 32 LED outputs (5VDC / 15mA). The configuration tool SWE330A makes programming even more convenient.

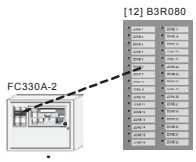
[11] Mounting plate Z3I830
Mounting plate Z3I830 allows integration of electronic accessories when no other expansion cards have been installed.

Other control panel-interior options
Various modules, for instance up to sixteen Z3B171 relay modules, may be installed quickly and easily on U or C rails.

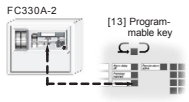
[12] Relay module Z3B171
The relay module (250VAC / 10A) is an additional fire event control module, activated by the control panel's control outputs. Up to 16 relay modules may be connected to the control panel FC330A

[13] Optional power supply Z3I1000
The additional power supply Z3I1000 consists of a power supply – monitoring card M3P140 and the power supply B2F040.
This set is needed if the current calculation exceed the power supply output of the main board. Power supply output of the Z3I1000 max. 3.5A / 29.6VDC.

Further options for the front of the fire control panel
Optional components support simple event visualisation on the fire control panel.



Parallel indicator panel B3R080 with 32 alarm displays for panel module FC330A-2
The parallel indicator module visualizes important events, it contains 32 LED displays. One or more fire zones can be allocated to each of these 32 LEDs. The B3R080 may be used without the driver card K3L100. If external LEDs (using LED driver card K3L100), and internal LEDs (parallel indicator panel B3R080) are used at the same time, display activation is synchronous. The parallel indicator panel, built into the front of the control panel is connected directly to master board K3X020. This is used together with control panel type FC330A-2.



Programmable key
A key on the key pad may serve as additional input. The key may be programmed for various functions (e.g. lamp test). It can be easely connected via the F02F290 to the master board K3X020.

Technical data

Type	K3X020	K3M010	K3M020	K3M030	K3L100	K3G050	K3L070	K3I080	Z3B171	B3R080
Current consumption										
Normal operation	128mA[1) 2)]	<25mA	<72mA	2mA[1) 2)]	17mA	20mA	12mA	10mA	0mA	2mA
Alarm condition	+9mA[3)]	+40mA[4)] +9mA[3)]	+40mA[4)]	0mA	+6mA[5)]	+9mA[3)]	+40mA	0mA[7)]	+27mA	+6mA[6)]

[1)] Each loop without any devices consumes additional 14mA
[2)] 0.2mA normal operation current consumption per addressable device connected
[3)] Per activated contact/control line/buzzer, without external load (sounders, etc.)
[4)] Per line in alarm
[5)] Per activated driver output
[6)] Per activated LED
[7)] LON devices see document no. 007349

Programmable output	8 x 24VDC / 40mA
Relay output	2 x 30VDC / 1A
Transmission output	2 x 30VDC / 1A
Monitored outputs (Sirens)	2 x 24VDC / 500mA
Programmable input	4
Programmable key input	1
Programmable fire zones	512
Programmable control zones	128
Cable specification	150Ohm / 300nF
Mains	115 / 230VAC (+10% / -15%) 50 / 60Hz
Power consumption	< 100VA
Battery	2 x 12V / 15Ah (+2 x 12V / 15Ah)
Standards	EN54-2, IEC721-3-3 / 3K5
Colour	light grey (RAL 7035)
Approvals	VdS (S 298015); LPCB; a.m.m.

Reference documents

Doc. no.1583	Synova FC330A	Planning, Installation, Commissioning, Operating Programming, Trouble Shooting, Maintenance
Doc. no. 1973	Synova FC330A	Operating Manual, System Operation for User
Doc. no. 1923	Synova FC330A	Remote indicating & Control devices, Logging Printer (Installation & Commissioning)
Doc. no. 007349	LON-Bus	Data Sheet

Details for ordering

Type	Part no	Designation	Weight
FC330A-1	566557	Fire control panel, 2 LOOP analogue	11.940kg
FC330A-2	566560	Fire control panel, 2 LOOP with mounting facility	11.940kg
FC330A-4	566586	Fire control panel 2 LOOP in special housing	22.300kg
FCA105	576013	Accessory set (EPROM, inscription stripes)	
		Options for FC330A-2	
B3R080	523846	Parallel indicator panel (32 alarm indicators)	0.285kg
H23B030	523862	Cover plate	0.200kg
		Accessories	
Z3S020	484082	Key switch module «Nordic access key»	0.140kg
Z3S030	484095	Key switch module «like-keyed»	0.140kg
Z3I830	513665	Mounting plate for accessories	0.590kg
Z3B171	484383	Relay module with 1 contact 250VAC/10A	0.040kg
F02F290	513762	Connecting ribbon cable for optional key	0.210kg
TS35	564478	U-rail TS35/7.5/122	0.015kg
TS32	564575	C-rail TS32/108	0.074kg
TKU2	230508	Surveillance contact	0.019kg
		Expansion	
K3M010	523817	4 Conventional lines card	0.150kg
K3M020	498418	12 Conventional lines card	0.280kg
K3M030	542160	2 loop expansion card	0.120kg
K3G050	512970	Relay card	0.254kg
K3I080	504768	RS232/LON-bus Converter	0.325kg
K3L070	523820	VdS-interface card 'D'	0.330kg
K3L100	529015	LED driver card for 32 external LED	0.300kg
Z3I1000	559344	Additional power supply	0.880kg
Z3I1020	576000	Battery extension set (For 2nd battery pack)	0.300kg

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